UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/825,013	04/03/2001	Yasuhiko Morimoto	JP920000043	3853

7590 07/18/2003

Robert P. Tassinari, Jr.
Intellectual Property Law Dept.
IBM Corporation
P.O. Box 218
Yorktown Heights, NY 10598

EXAMINER	
NGUYEN, TAM V	
ART UNIT	**PAPER NUMBER**
2172	4

DATE MAILED: 07/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/825,013	Applicant(s) MORIMOTO ET AL.	
	Examiner Tam V Nguyen	Art Unit 2172	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-23 are pending in this office action. Claims 1-23 are presented for examination. This office action is in response to the filing dated 4/03/01.

Information Disclosure Statement

2. The references cited in the IDS, PTO 1449, Paper No. 4, have been considered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-10, 20-21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellesfield et al. (US 6498982B2) in view of Krzysztof Koperski (Spatial Data Mining).

With respect to claims 1 and 20, Bellesfield discloses providing from said database a starting point or a starting point group, (col. 3, lines 53-63); defining an objective function that is examined in order to introduce said spatial rules, (col. 3, lines 53-63 and col. 6, lines 52-59); and calculating a distance from or an orientation block originating at said starting point or said starting point group in order to optimize said objective function that is defined, (col. 6, lines 20-24).

Bellesfield discloses the data structure contains both places of interest data and geographic center data. The place of interest data includes fields for "place name" and

"geographic center". The "place name" contains the name of a place of interest, such as a hotel, restaurant, attraction, etc. Each "place name" is associated with "geographic center", such as a city. However, Bellesfield does not explicitly teach ***spatial rule.*** Koperski discloses a user may want to describe parks by presenting the description of relation between parks and other objects like: railway, restaurants, zoos, hydrological objects, recreational objects, and roads. Furthermore, the user can state that he/she is interested only in objects in the distance less than one kilometer from a park. The first step of the algorithm collects the task-relevant data. Then, some efficient spatial computations are performed as mentioned above to extract spatial associations at the level of generalized spatial relations, (pages 64, 1st col., lines 15-24) as a ***spatial rule***. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bellesfield by including spatial rule as taught by Koperski in order to retrieve the result faster and precisely.

As to claims 2 and 7, wherein said objective function is a function for which a distance or an orientation requested by an analyzation business is not provided, (col. 3, lines 53-63).

As to claim 3, the spatial data mining method according to claim 1, further comprising a step of: entering as input parameters the definition of a distance, the definition of said starting point or said starting point group and the definition of said objective function, (col. 3, lines 53-63).

As to claim 4, the spatial data mining method according to claim 1, wherein, at said step of calculating said distances, an intermediate table is generated based on starting point set data consisting of said starting point group and said objective function, and in accordance with distance values, attribute values for query points in said database are added together, based on said intermediate table, (col. 6, lines 20-24).

As to claims 5 and 10, the spatial data mining method according to claim 1, further comprising a step of: displaying on a map said distance or said orientation block relative to said starting point or said starting point group, (col. 3, lines 50-53).

As to claims 6 and 23, Bellesfield discloses providing from said database a starting point or a starting point group, (col. 3, lines 53-63); employing said starting point or said starting point group to define an orientation, (col. 3, lines 53-63); defining an objective function that is examined in order to introduce said spatial rules, (col. 3, lines 53-63); and calculating a distance from or an orientation block originating at said starting point or said starting point group in order to optimize said objective function that is defined, (col. 6, lines 20-24).

Bellesfield discloses the data structure contains both places of interest data and geographic center data. The place of interest data includes fields for “place name” and “geographic center”. The “place name” contains the name of a place of interest, such as a hotel, restaurant, attraction, etc. Each “place name” is associated with “geographic

center", such as a city. However, Bellesfield does not explicitly teach ***spatial rule.*** Koperski discloses a user may want to describe parks by presenting the description of relation between parks and other objects like: railway, restaurants, zoos, hydrological objects, recreational objects, and roads. Furthermore, the user can state that he/she is interested only in objects in the distance less than one kilometer from a park. The first step of the algorithm collects the task-relevant data. Then, some efficient spatial computations are performed as mentioned above to extract spatial associations at the level of generalized spatial relations, (pages 64, 1st col., lines 15-24) as ***spatial rule***. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bellesfield by including spatial rule as taught by Koperski in order to retrieve the result faster and precisely.

As to claim 8, the spatial data mining method according to claim 6, wherein said orientation block is obtained by employing the numerical value of said orientation used to optimize said objective function (col. 3, lines 53-63).

As to claim 9, the spatial data mining method according to claim 6, wherein a search objective data range, at equal distances from said starting point and from said starting point group, that is appropriate for calculating an orientation is selected as said orientation block, (col. 3, lines 53-63).

With respect to claim 21, Bellesfield discloses starting point provision means for providing starting points or starting point groups obtained from said database, (col. 3, lines 53-63); orientation definition means for employing said starting points or said starting point group to define distances or orientation, (col. 3, lines 53-63); objective function definition means for defining an objective function that is to be examine in order to introduce said spatial rule, (col. 3, lines 53-63); and orientation block calculation means for calculating orientation blocks beginning at said starting points or said starting point groups to optimize said objective function that is defined, (col. 6, lines 20-24).

Bellesfield discloses the data structure contains both places of interest data and geographic center data. The place of interest data includes fields for "place name" and "geographic center". The "place name" contains the name of a place of interest, such as a hotel, restaurant, attraction, etc. Each "place name" is associated with "geographic center", such as a city. However, Bellesfield does not explicitly teach ***spatial rule.*** Koperski discloses a user may want to describe parks by presenting the description of relation between parks and other objects like: railway, restaurants, zoos, hydrological objects, recreational objects, and roads. Furthermore, the user can state that he/she is interested only in objects in the distance less than one kilometer from a park. The first step of the algorithm collects the task-relevant data. Then, some efficient spatial computations are performed as mentioned above to extract spatial associations at the level of generalized spatial relations, (pages 64, 1st col., lines 15-24) as a ***spatial rule***. Therefore, it would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify Bellesfield by including spatial rule as taught by Koperski in order to retrieve the result faster and precisely.

5. Claims 11, 15, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellesfield et al. (US 6498982B2) in view of Park (US 6192164B1).

With respect to claims 11 and 22, Bellesfield providing a set of starting points and a set of query points in a database, (col. 3, lines 53-63); designating an upper limit for a distance between said set of starting points and said set of query points, (col. 3, lines 53-63); calculating a distance between each starting point and each query point, (col. 6, lines 20-24).

Bellesfield discloses the data structure contains both places of interest data and geographic center data. The place of interest data includes fields for "place name" and "geographic center". The "place name" contains the name of a place of interest, such as a hotel, restaurant, attraction, etc. Each "place name" is associated with "geographic center", such as a city. However, Bellesfield does not teach ***calculating an angle formed between a starting point and a query point whose distance from said starting point does not exceed said designated upper limit; and generating a data table using said angle formed with said starting point.*** Part teaches the DSP 62 calculates the angle between the sampling point A the pixel point S on the start scan line P and the angle between the sampling point B the pixel point S on the next scan line C, and then calculates the interpolation coefficient I represented by the ratio of the

angle between the A and S and that between the B and S, (col. 4, lines 65-col. 5, lines 4) as step of ***calculating an angle formed between a starting point and a query point whose distance from said starting point does not exceed said designated upper limit***. An address controller 50 receives pixel distance data dx and dy from the interpolation data store 42, generates a write address for storing the output of the radial interpolation table 14 in a frame memory 20, and outputs read clock R-CLD to the input memory, (col. 3, lines 36-42), as step of ***generating a data table using said angle formed with said starting point***. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bellesfield by including calculating an angle formed between a starting point and a query point whose distance from said starting point does not exceed said designated upper limit; and generating a data table using said angle formed with said starting point as taught by Park. By doing so, the system would be able to calculate data whose position is represented by a rectangular coordinate system, (col. 1, lines 10-11).

As to claim 15, Bellesfield discloses input means for inputting of an objective function required for the optimization of an orientation, (col. 3, lines 53-63), and optimal orientation calculation means for calculating, based on said intermediate table generated by said intermediate table generation means, an orientation for optimizing the value of said objective function that is entered by said input means, (col. 6, lines 20-24).

Bellesfield discloses Dijkstra's algorithm to find the shortest path between a departure point and a destination point, the algorithm begins at the departure node and

spread out through the road network of nodes an links stored in the routing database 30, adding nodes to a saved list of nodes that we have found the shortest path to, until the destination node is include in this list of nodes, (col. 8, lines 12-19). However, Bellesfield does not disclose ***intermediate table generation means for employing, based on starting point data and query point data in said database, angles of 0 degrees from said starting points in a specific direction to generate an intermediate table in which the orientation of the locations of said query points are included***. Park teaches the DSP 62 calculates the sampling start points based on the radius r possessed by each pixel point and the angles 0 of the start scan line P and the next scan line C relating to the pixel point, in order to obtain the sampled data from the sampling point corresponding to the pixel points obtained in the above-described manner. The calculated sampling points are stored in the sampling clock store 44 in the form of the sampling clock, (col. 5, lines 8-16). And an address controller 50 receives pixel distance data dx and dy from the interpolation data store 42, generates a write address for storing the output of the radial interpolation table 14 in a frame memory 20, and outputs read clock R-CLK to the input memory 12, (col. 3, lines 37-42) as step of ***intermediate table generation means for employing, based on starting point data and query point data in said database, angles of 0 degrees from said starting points in a specific direction to generate an intermediate table in which the orientation of the locations of said query points are included.*** Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bellesfield by including intermediate table generation means for employing,

based on starting point data and query point data in said database, angles of 0 degrees from said starting points in a specific direction to generate an intermediate table in which the orientation of the locations of said query points are included as taught by Park. By doing so, the system would be able to calculate data whose position is represented by a rectangular coordinate system, (col. 1, lines 10-11).

6. Claim 12 rejected under 35 U.S.C. 103(a) as being unpatentable over Bellesfield et al (US 6498982B2) in view of Richard et al. (US 6484160B1).

With respect to claim 12, Bellesfield input means for inputting of an objective function required for the optimization of a distance, (col. 3, lines 53-63); intermediate table generation means for employing in said database starting point data and query point data for calculating the distances between each starting point and each query point and generating an intermediate table, (col. 6, lines 20-24) optimal distance calculation means for calculating a distance, based on said intermediate table generated by said intermediate table generation means, in order to optimize the value of said objective function that is entered by said input means, (col. 6, lines 20-24).

Bellesfield discloses the data structure contains both places of interest data and geographic center data. The place of interest data includes fields for "place name" and "geographic center". The "place name" contains the name of a place of interest, such as a hotel, restaurant, attraction, etc. Each "place name" is associated with "geographic center", such as a city. However, Bellesfield does not explicitly teach ***generating an***

intermediate table. Richard teaches the B+ tree form data structures that make it possible to accelerate the physical searches for strings by calculating keys and creating intermediate table, (col. 6, lines 57-60) as step of *generating an intermediate table.* Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bellesfield by including generating an intermediate table as taught by Richard so the system would optimizing accesses to a database, (col. 1, lines 7-8).

7. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellesfield et al. (US 6498982B2) as applied to claim 12 above, and in view of Richard et al. (US 6484160B1) and further in view of Akara et al. (US 5644656).

As to claim 13, Bellesfield individual distance calculation means for selecting an optimization function from among objective functions to be examined, and adding together record values, collected from said data records, that are required for optimization of each of said distances, (col. 6, lines 20-24).

Bellesfield and Richard disclose Dijkstra's algorithm to find the shortest path between a departure point and a destination point, the algorithm begins at the departure node and spread out through the road network of nodes an links stored in the routing database 30, adding nodes to a saved list of nodes that we have found the shortest path to, until the destination node is include in this list of nodes, (col. 8, lines 12-19). However, Bellesfield and Richard do not disclose ***Voronoi diagram preparation***

means for preparing a Voronoi diagram by using said starting point data in said database; distance calculation means for employing said Voronoi diagram, prepared by said Voronoi diagram preparation means, and said query point data in said database to calculate distance between individual starting points and individual query points and to generate data records. Akra teaches for every point in T, the closest point in S can be found in O(logN) steps. While this might look like an O(Mnlog2N) algorithm, it is not, and the reason is that the Voronoi diagram is calculated for S only once. All the deformations are performed on T (deformations are described later), and any calculation of the single-sided Housdorff distance from T to S become actually an O(MlogN) operation. Compare this with the direct approach which is an O(MN) operation as mentioned above. Further details of computing the Voronoi diagram and the list of closest points can be found, for example, in textbooks on computational geometry, (col. 11, lines 61-col. 12, lines 6) as ***Voronoi diagram preparation means for preparing a Voronoi diagram by using said starting point data in said database; distance calculation means for employing said Voronoi diagram, prepared by said Voronoi diagram preparation means, and said query point data in said database to calculate distance between individual starting points and individual query points and to generate data records.*** Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bellesfield with the teachings of Richard and further with the teachings of Akra. By doing so, the system is capable of determining the region to which it belongs, (col. 1, lines 47-48).

As to claim 14, Akra further discloses data mining apparatus according to claim 13, wherein said Voronoi diagram preparation means repeats plane quarter division in accordance with the number of starting points that are entered, sorts said starting points into end plane pixels obtained by division and selects one starting point in each of said end plane pixels as a representative point for the pertinent pixel, prepares a quaternary incremental tree with pixels at individual levels being defined as intermediate nodes, scans said individual nodes of said quaternary incremental tree in the breadth-first order, beginning at the topmost level, and outputs a set of starting points that are positioned in ranks, (col. 11, lines 61-col. 12, lines 6)

8. Claim 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Bellesfield et al. (US 6498982B2) as applied to claim 15 above, in view of Park (US 6192164B1) and further in view of Akra et al. (US 5644656).

As to claim 16, Bellesfield discloses orientation calculation means for calculating, based on said distances obtained by said distance calculation means, orientations of said starting points with said query points that fall within a designated distance upper limit, and storing said orientations as data records for said intermediate table, (col. 6, lines 20-24); and individual orientation calculation means for selecting an optimization function from among objective functions to be examined, and collecting and adding record values, from said data records, that are required for optimization of each of said distances, (col. 6, lines 20-24).

Bellesfield and Park disclose calculate the start points. However, Bellesfield and Park do not disclose ***a Voronoi diagram preparation means for preparing a Voronoi diagram by using said starting point data in said database; distance calculation means for employing said Voronoi diagram prepared by said Voronoi diagram preparation means and said query point data in said database to calculate distances between individual starting points and individual query points.*** Akra teaches for every point in T, the closest point in S can be found in O(logN) steps. While this might look like an O(Mnlog2N) algorithm, it is not, and the reason is that the Voronoi diagram is calculated for S only once. All the deformations are performed on T (deformations are described later), and any calculation of the single-sided Housdorff distance from T to S become actually an O(MlogN) operation. Compare this with the direct approach which is an O(MN) operation as mentioned above. Further details of computing the Voronoi diagram and the list of closest points can be found, for example, in textbooks on computational geometry, (col. 11, lines 61-col. 12, lines 6) as ***Voronoi diagram preparation means for preparing a Voronoi diagram by using said starting point data in said database; distance calculation means for employing said Voronoi diagram prepared by said Voronoi diagram preparation means and said query point data in said database to calculate distance between individual starting points and individual query points.*** Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Bellesfield with the teachings of Park and further with the teachings of

Akra. By doing so, the system is capable of determining the region to which it belongs, (col. 1, lines 47-48).

9. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellesfield et al. (US 6498982B2) in view of Kuhn (US 5457439).

With respect to claim 17, Bellesfield discloses input means for the input of an objective function for which a distance or an orientation requested by an analyzation business is not provided, (col. 3, lines 50-63). Optimal distance/orientation calculation means for employing starting point data and query point data in said database for calculating a distance between, or the orientation of each of the starting points with each of the query points, and calculating said optimal distance or said optimal orientation for the optimization of the value of said objective function, (col. 6, lines 20-24).

Bellesfield discloses at step 144, the routing component 46 collects the shape points from the routing database 30 for all the links which form the calculated route. From these shape points, the routing component 46 generates a video line, over the bit-mapped image on the display monitor 18, which corresponds to the calculated route (step 148), (col. 12, lines 12-17). However, Bellesfield does not ***display means for displaying, on the screen of a geographical information system, said optimal distance or said optimal orientation calculated by said optimal distance/orientation calculation means***. Kuhn teaches the display presents a green

circular area if the speed and the distance from the vehicle in front are in the permitted, instantaneously safe range. If the vehicle speed exceeds the permitted speed by a first limit amount (for example 5%), or if the distance from the vehicle in front become smaller than the distance which the vehicle covers with a first prescribed time period, (for example, two seconds), the display changes gradually from the circular shape, to an elongated area with a shape which extends more horizontally (that is, transversely with respect to the direction of travel) than vertically (that is, in the direction of travel), and the color of the area shown changes from green to yellow, (col. 1, lines 63-col. 2, lines 8) as step of ***display means for displaying, on the screen of a geographical information system, said optimal distance or said optimal orientation calculated by said optimal distance/orientation calculation means.*** Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bellesfield by including ***display means for displaying, on the screen of a geographical information system, said optimal distance or said optimal orientation calculated by said optimal distance/orientation calculation means*** as taught by Kuhn so the system can inform the operator of a motor vehicle of the level of danger of the instantaneous driving situation, (col. 1, lines 10-11).

As to claim 18, Bellesfield discloses at step 144, the routing component 46 collects the shape points from the routing database 30 for all the links, which form the calculated route. From these shape points, the routing component 46 generates a video line, over the bit-mapped image on the display monitor 18, which corresponds to

the calculated route (step 148), (col. 12, lines 12-17). However, Bellesfield does not explicitly teach ***wherein said display means uses said optimal distance calculated by said optimal distance/orientation calculation means for the display of circular areas, the centers of which are starting points.*** Kuhn teaches the display presents a green circular area if the speed and the distance from the vehicle in front are in the permitted, instantaneously safe range. If the vehicle speed exceeds the permitted speed by a first limit amount (for example 5%), or if the distance from the vehicle in front become smaller than the distance which the vehicle covers with a first prescribed time period, (for example, two seconds), the display changes gradually from the circular shape, to an elongated area with a shape which extends more horizontally (that is, transversely with respect to the direction of travel) than vertically (that is, in the direction of travel), and the color of the area shown changes from green to yellow, (col. 1, lines 63-col. 2, lines 8) as step of ***wherein said display means uses said optimal distance calculated by said optimal distance/orientation calculation means for the display of circular areas, the centers of which are starting points***. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Bellesfield by including ***wherein said display means uses said optimal distance calculated by said optimal distance/orientation calculation means for the display of circular areas, the centers of which are starting points*** as taught by Kuhn so the system can inform the operator of a motor vehicle of the level of danger of the instantaneous driving situation, (col. 1, lines 10-11).

As to claim 19, Bellesfield discloses at step 144, the routing component 46 collects the shape points from the routing database 30 for all the links, which form the calculated route. From these shape points, the routing component 46 generates a video line, over the bit-mapped image on the display monitor 18, which corresponds to the calculated route (step 148), (col. 12, lines 12-17). However, Bellesfield does not explicitly teach wherein said display means uses said optimal orientation, calculated by said optimal distance/orientation calculation means, for the display of fan-shaped portions of said circular areas, the origins of said fan-shaped portions being said starting points at said centers of said circular areas. Kuhn teaches the display presents a green circular area if the speed and the distance from the vehicle in front are in the permitted, instantaneously safe range. If the vehicle speed exceeds the permitted speed by a first limit amount (for example 5%), or if the distance from the vehicle in front become smaller than the distance which the vehicle covers with a first prescribed time period, (for example, two seconds), the display changes gradually from the circular shape, to an elongated area with a shape which extends more horizontally (that is, transversely with respect to the direction of travel) than vertically (that is, in the direction of travel), and the color of the area shown changes from green to yellow, (col. 1, lines 63-col. 2, lines 8) as step of ***wherein said display means uses said optimal orientation, calculated by said optimal distance/orientation calculation means, for the display of fan-shaped portions of said circular areas, the origins of said fan-shaped portions being said starting points at said centers of said circular areas.*** Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

to modify Bellesfield by including wherein said display means uses said optimal orientation, calculated by said optimal distance/orientation calculation means, for the display of fan-shaped portions of said circular areas, the origins of said fan-shaped portions being said starting points at said centers of said circular areas as taught by Kuhn so the system can inform the operator of a motor vehicle of the level of danger of the instantaneous driving situation, (col. 1, lines 10-11).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lee (US 6397208B1) shows system and method for locating real estate in the context of points-of-interest.

Mikkola et al. (US 6529143B2) shows information retrieval system.

Chojnacki et al. (US 6366851B1) shows method and system for automatic centerline adjustment of shape point data for a geographic.

Millington (US 6178380B1) shows street identification for a map zoom of a navigation system.

Contact Information

11. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tam V Nguyen whose telephone number is (703) 305-3735. The examiner can normally be reached on 7:30AM-5: 00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Yen Vu can be reached on (703) 305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for formal communications and (703) 746-7240 for informal communications.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, Virginia 22202. Fourth Floor (Receptionist).

12. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

TV:tv

07/07/03

SAlam
Primary
SHAHID AL ALAM
PATENT EXAMINER